AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) A liquid crystal drive method comprising a circuit having a plurality of gradation voltages to be given to a pixel electrode of a liquid crystal and a common voltage given to a common electrode of the liquid crystal in which said common voltage is switched between a positive phase and a negative phase, a first voltage is applied as said gradation voltage in the positive phase of said common voltage, a second voltage is applied as said gradation voltage in the negative phase of said common voltage, said first voltage and said second voltage are opposite in polarity with reference to a voltage of the common electrode, said first voltage is selected from first display data, and said second voltage is selected from second display data,

wherein said first display data and said second display data are obtained by converting display data from outside, and when said first and second display data are the same, said first display data and said second display

data are in the same bit pattern except for one specified bit.

2. (Original) The liquid crystal drive method according to claim 1, wherein said one specified bit is the highest order bit.

3. (Original) The liquid crystal drive method according to claim 2,

wherein when a positive-negative switch signal of said positive phase and negative phase is at a level corresponding to logic 0, the highest order bits of said first display data and second display data are allocated as they are, respectively, and when said positive-negative switch signal is at a level corresponding to logic 1, the highest order bits of said first display data and said second display data are inverted and allocated, respectively,

wherein when said highest order bits are at a level corresponding to logic 1, data of the second order and lower bits of said first display data and second display data are allocated as they are, and when said highest order bits are at a level corresponding to logic 0, the second order and lower bits of said first display data and second

display data are inverted and allocated.

4. (Original) The liquid crystal drive method according to claim 1,

wherein said circuit outputs display data from an incorporated memory writing and reading said display data to be displayed on a liquid crystal panel, and

wherein said display data is converted by a display data conversion circuit to said first display data and second display data, respectively, by control of the positive-negative switch signal.

5. (Currently Amended) The liquid crystal drive method according to claim 1 ~~or 4~~, wherein said display data is given by a microprocessing unit for generating said display data.

6. (Original) A liquid crystal display system comprising:

a liquid crystal display panel having a signal line supplying a gradation voltage to a pixel electrode, a scanning line selecting the pixel electrode, and a common electrode opposite said pixel electrode;

a liquid crystal drive voltage generation circuit

generating a plurality of gradation voltages for gradation display;

a segment driver including an output gradation selector selecting any one of said plurality of gradation voltages according to display image data to output the gradation voltage to the signal line of said liquid crystal display panel;

a gate driver outputting a select signal sequentially selecting the scanning line of said liquid crystal display panel according to a display timing signal; and

a common electrode drive circuit switching a common voltage given to the common electrode of said liquid crystal display panel by a positive-negative switch signal corresponding to a positive phase and a negative phase,

wherein said common electrode drive circuit switches said common voltage between said positive phase and negative phase,

wherein said output gradation selector receives, as an input, first display data in the positive phase of said common voltage, outputs a signal selecting a first voltage as said gradation voltage corresponding to said first display data to said liquid crystal drive voltage generation circuit, receives, as an input, second display data in the negative phase of said common voltage, and

outputs a signal selecting a second voltage as said gradation voltage corresponding to said second display data to said liquid crystal drive voltage generation circuit,

wherein said first display data and said second display data are obtained by converting display data from outside, and there is provided a display data conversion circuit that converts for output, to said first display data and said second display data, display data to be displayed on said liquid crystal display panel so that other bits are the same except for one specified bit when said first and second display data are the same.

7. (Original) The liquid crystal display system according to claim 6,

wherein said one specified bit is the highest order bit, and

wherein said display data conversion circuit outputs the highest order bits of display data as they are when a positive-negative switch signal of said positive phase and negative phase is at a level corresponding to logic 0, inverts and outputs the highest order bits of said display data when said positive-negative switch signal is at a level corresponding to logic 1, thereby forming the highest order bits of said first display data and second display

data, outputs data of the second order and lower bits of said first display data and second display data as they are when said highest order bits are at a level corresponding to logic 1, and outputs inverted data of the second order and lower bits of said first display data and second display data when said highest order bits are at a level corresponding to logic 0.

8. (Original) The liquid crystal display system according to claim 7, wherein said first display data and second display data are transmitted to a decoder circuit having a low voltage amplitude corresponding to a logic circuit, an output signal of the decoder circuit is transmitted to a level shifter circuit shifting a signal of said low voltage amplitude to a signal of a high voltage amplitude, and an output signal of the level shifter circuit is decoded to form a select signal selecting said gradation voltage.

9. (Original) The liquid crystal display system according to claim 8, wherein an operation voltage of said level shifter circuit is a boost voltage formed by a charge pump circuit.

10. (Original) The liquid crystal display system according to claim 6, wherein said segment driver has an incorporated memory writing and reading said display data to be displayed on said liquid crystal panel, and

wherein said display data conversion circuit converts said display data outputted from said incorporated memory to said first display data and second display data, respectively, by a positive-negative switch signal.

11. (Currently Amended) The liquid crystal display system according to claim 6~~ or 10~~, wherein said liquid crystal display system has a microprocessing unit for generating said display data.

12. (Original) A liquid crystal drive control device comprising:

a liquid crystal drive voltage generation circuit generating a plurality of gradation voltages for gradation display;

a segment driver including an output gradation selector selecting any one of said plurality of gradation voltages according to display image data to output the gradation voltage to a signal line of said liquid crystal display panel;

a gate driver outputting a select signal sequentially selecting a scanning line of said liquid crystal display panel according to a display timing signal; and

a common electrode drive circuit switching a common voltage given to a common electrode of said liquid crystal display panel by a positive-negative switch signal corresponding to a positive phase and a negative phase and to be given to a pixel electrode of a liquid crystal based on a voltage given to said common electrode,

wherein said common electrode drive circuit switches said common voltage between said positive phase and negative phase,

wherein said output gradation selector receives, as an input, first display data in the positive phase of said common voltage, outputs a signal selecting a first voltage as said gradation voltage corresponding to said first display data to said liquid crystal drive voltage generation circuit, receives, as an input, second display data in the negative phase of said common voltage, and outputs a signal selecting a second voltage as said gradation voltage corresponding to said second display data to said liquid crystal drive voltage generation circuit, and

wherein said first display data and said second

display data are obtained by converting display data from outside, and there is provided a display data conversion circuit that converts for output, to said first display data and said second display data, said display data to be displayed on said liquid crystal display panel so that other bits are the same except for one specified bit when said display data are the same.

13. (Original) The liquid crystal drive control device according to claim 12,

wherein said one specified bit is the highest order bit, and

wherein said display data conversion circuit outputs the highest order bits of display data as they are when a positive-negative switch signal of said positive phase and negative phase is at a level corresponding to logic 0, inverts and outputs the highest order bits of said display data when said positive-negative switch signal is at a level corresponding to logic 1, thereby forming the highest order bits of said first display data and second display data, outputs data of the second order and lower bits of said first display data and second display data as they are when said highest order bits are at a level corresponding to logic 1, and outputs inverted data of the second order

and lower bits of said first display data and second display data when said highest order bits are at a level corresponding to logic 0.

14. (Original) The liquid crystal drive control device according to claim 13, wherein said first display data and second display data are transmitted to a decoder circuit having a low voltage amplitude corresponding to a logic circuit, an output signal of the decoder circuit is transmitted to a level shifter circuit shifting a signal of said low voltage amplitude to a signal of a high voltage amplitude, and an output signal of the level shifter circuit is decoded to form a select signal selecting said gradation voltage.

15. (Original) The liquid crystal drive control device according to claim 14, wherein an operation voltage of said level shifter circuit is a boost voltage formed by a charge pump circuit.

16. (Original) The liquid crystal drive control device according to claim 12,

wherein said segment driver has an incorporated memory writing and reading said display data to be displayed on a

liquid crystal panel, and

wherein said display data conversion circuit converts said display data outputted from said incorporated memory to said first display data and second display data, respectively, by a positive-negative switch signal.

17. (Currently Amended) The liquid crystal drive control device according to claim 12~~ or 16~~, wherein said display data is given by a microprocessing unit for generating said display data.

18. (Original) The liquid crystal drive control device according to claim 12, which is manufactured over one semiconductor substrate.

19. (New) The liquid crystal drive method according to claim 4, wherein said display data is given by a microprocessing unit for generating said display data.

20. (New) The liquid crystal display system according to claim 10, wherein said liquid crystal display system has a microprocessing unit for generating said display data.

21. (New) The liquid crystal drive control device according to claim 16, wherein said display data is given by a microprocessing unit for generating said display data.